

09/504,782

DERWENT-ACC-NO: 2002-477631

DERWENT-WEEK: 200251

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TITLE: Nitride semiconductor device and  
manufacturing method  
thereof

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PRIORITY-DATA: 2000KR-0033763 (June 20, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	
PAGES	MAIN-IPC		
KR 2002000898 A	January 9, 2002	N/A	001
H01L 029/772			

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
KR2002000898A	N/A	2000KR-0033763
June 20, 2000		

INT-CL (IPC): H01L029/772

ABSTRACTED-PUB-NO: KR2002000898A

BASIC-ABSTRACT:

NOVELTY - A method for manufacturing a nitride semiconductor device is provided to easily grow an indium-containing compound layer like an  $In_xAl_{1-x}N$  layer, by growing  $In_xGa_{1-x}N$  as a buffer layer so that mole density of indium is easily increased or decreased.

DETAILED DESCRIPTION - The buffer layer(12) is stacked on a substrate(11). A semiconductor layer group including at least a semiconductor layer is stacked on the buffer layer, wherein the buffer layer includes an indium-containing nitride. A nitride semiconductor device includes the substrate, the buffer layer and the semiconductor layer.

CHOSEN-DRAWING: Dwg.1/10

TITLE-TERMS: NITRIDE SEMICONDUCTOR DEVICE  
MANUFACTURE METHOD

DERWENT-CLASS: L03 U11 U12

CPI-CODES: L04-A02B1; L04-A02C1;

EPI-CODES: U11-C05B5; U12-E01A1;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2002-135647

제2 상부 클래드층

P형  $In_xAl_yGa_{1-x-y}N$  ( $0 < x < 1, 0 < y < 1$ )

제1 상부 클래드층

P형  $In_xAl_yGa_{1-x-y}N$  ( $0 < x < 1, 0 < y < 1$ )

활성층

$In_xGa_{1-x}N$  ( $0 < x < 1$ )

제2 하부 클래드층

n형  $In_xAl_yGa_{1-x-y}N$  ( $0 < x < 1, 0 < y < 1$ )

제1 하부 클래드층

n형  $In_xAl_yGa_{1-x-y}N$  ( $0 < x < 1, 0 < y < 1$ )

마파층

$In_xGa_{1-x}N$  ( $0 < x < 1$ )

기판

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